

WHAT IS CLAIMED IS:

1. A method of driving a display, comprising:
correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and
reducing high frequency components in a spatial domain of the corrected at least one pixel.
2. A method of driving a display, comprising:
correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and
reducing an unacceptable peak in a spatial domain from the corrected at least one pixel.
3. A method of driving a display, comprising:
correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level;
calculating a first mean of corrected grayscale levels of a first group of pixels in proximity to the at least one corrected pixel;
calculating a second mean of corrected grayscale

levels of a second group of pixels in proximity to a corrected pixel determined to have an unacceptable grayscale level, upon the first mean differing from a grayscale level of the corrected pixel by more than a threshold value; and

changing the unacceptable grayscale level to a grayscale level equal to the second mean.

4. The method of claim 3, wherein

the second group of pixels is relatively closer to the corrected pixel determined to have an unacceptable grayscale level, than is the first group of pixels.

5. The method of claim 3, wherein

the first group of pixels is located on a segment having a midpoint at the corrected pixel determined to have an unacceptable grayscale level.

6. A method of driving a display, comprising:

correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a next grayscale level;

calculating a mean difference in grayscale level between the at least one pixel and a plurality of pixels of a

first group of pixels, located on a segment having a midpoint at the at least one pixel and located to one direction of the at least one pixel, calculating a mean difference in grayscale level between the at least one pixel and a plurality of the first group of pixels located to another direction of the at least one pixel, and determining that the at least one pixel has an unacceptable grayscale level upon the mean differences having different signs; and
calculating a second mean of corrected grayscale levels of a second group of pixels in proximity to the at least one pixel upon the at least one pixel being determined to have an unacceptable grayscale level; and
changing the unacceptable grayscale level to a grayscale level equal to the second mean.

7. The method of claim 6, wherein

the second group of pixels is located on a relatively shorter segment having a midpoint at the pixel, than the first group of pixels.

8. The method of claim 3, wherein there are multiple first groups of pixels located on respective segments in differing directions having a common midpoint at the specific pixel, wherein a calculation of a first mean of

corrected grayscale levels is repeated for each of the first groups of pixels, and wherein a determination of whether or not the corrected pixel has an unacceptable grayscale level is made according to a combination of determinations with respect to the directions.

9. The method of claim 3, wherein a video signal for the at least one pixel corrected in the first correction step is a video signal divided into multiple blocks and wherein the first group of pixels has substantially as long a relatively longer side, as the blocks.

10. A display, comprising:

- a first correction section, adapted to correct a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and

- a second correction section, adapted to reduce high frequency components in a spatial domain of the corrected at least one pixel.

11. A display, comprising:

- a first correction section, adapted to correct a grayscale level of at least one pixel to facilitate a transition

from a current grayscale level to a desired grayscale level;
and

a second correction section, adapted to reduce an unacceptable peak in a spatial domain of the corrected at least one pixel.

12. A display, comprising:

a first correction section, adapted to correct a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level;

a determination section, adapted to calculate a first mean of corrected grayscale levels of a first group of pixels in proximity to the corrected at least one pixel and adapted to determine whether the corrected at least one pixel has an unacceptable grayscale level, upon the first mean differing from a grayscale level of the corrected at least one pixel by more than a threshold value; and

a second correction section, adapted to calculate a second mean of corrected grayscale levels of a second group of pixels in proximity to the corrected at least one pixel, upon the determination section determining that the corrected at least one pixel has an unacceptable grayscale level, and adapted to change the unacceptable grayscale level of the corrected at least one pixel, to a grayscale level

equal to the second mean.

13. The display of claim 12, wherein the second group of pixels is located relatively closer to the at least one corrected pixel than the first group of pixels.

14. The display of claim 12, wherein the first group of pixels is located on a segment having a midpoint at the at least one corrected pixel.

15. A display, comprising:

- a first correction section, adapted to correct a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a next grayscale level;

- a determination section, adapted to calculate a mean difference in grayscale level between the at least one pixel and a plurality of pixels of a first group of pixels, located on a segment having a midpoint at the at least one pixel and located to one direction of the at least one pixel, and adapted to calculate a mean difference in grayscale level between the at least one pixel and a plurality of the first group of pixels located to another direction of the at least one pixel, and adapted to determine that the at least one pixel has an unacceptable grayscale level upon the mean

differences having different signs; and

a second correction section, adapted to calculate a second mean of corrected grayscale levels of a second group of pixels in proximity to the at least one pixel upon the at least one pixel being determined to have an unacceptable grayscale level and adapted to change unacceptable grayscale level to a grayscale level equal to the second mean.

16. The display of claim 15, wherein the second group of pixels is located on a relatively shorter segment having a midpoint at the pixel, than the first group of pixels.

17. The display of claim 12, wherein multiple first groups of pixels are located on respective segments in differing directions having a common midpoint at the specific pixel, the determination section being adapted to repeat the calculations for each of the first groups of pixels; and wherein the second correction section is adapted to determine the at least one pixel to have an unacceptable grayscale level according to a combination of calculations with respect to the directions.

18. The display of claim 12, wherein a video signal for the at least one pixel corrected in the first correction section is a video signal divided into multiple blocks and wherein the first group of pixels has substantially as long a relatively longer side, as the blocks.

19. The display of claim 10, wherein the display is a liquid crystal display and the at least one pixel includes at least one liquid crystal element of a liquid crystal display of a normally black, vertical align mode.

20. The display of claim 11, wherein the display is a liquid crystal display and the at least one pixel includes at least one liquid crystal element of a liquid crystal display of a normally black, vertical align mode.

21. The display of claim 12, wherein the display is a liquid crystal display and the at least one pixel includes at least one liquid crystal element of a liquid crystal display of a normally black, vertical align mode.

22. The display of claim 15, wherein the display is a liquid crystal display and the at least one pixel includes at least one liquid crystal element of a liquid crystal display

of a normally black, vertical align mode.

23. A program, adapted to cause a computer to execute:

correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and

reducing high frequency components in a spatial domain of the corrected at least one pixel.

24. A program, adapted to cause a computer to execute:

correcting a grayscale level of at least one pixels to facilitate a transition from a current grayscale level to a desired grayscale level; and

reducing an unacceptable peak in a spatial domain from the corrected at least one pixel.

25. A program, adapted to cause a computer to execute:

correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level;

calculating a first mean of corrected grayscale levels of a first group of pixels in proximity to the at least one corrected pixel;

calculating a second mean of corrected grayscale

levels of a second group of pixels in proximity to a corrected pixel determined to have an unacceptable grayscale level, upon the first mean differing from a grayscale level of the corrected pixel by more than a threshold value; and

changing the unacceptable grayscale level to a grayscale level equal to the second mean.

26. A program, adapted to cause a computer to execute:

correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a next grayscale level;

calculating a mean difference in grayscale level between the at least one pixel and a plurality of pixels of a first group of pixels, located on a segment having a midpoint at the at least one pixel and located to one direction of the at least one pixel, calculating a mean difference in grayscale level between the at least one pixel and a plurality of the first group of pixels located to another direction of the at least one pixel, and determining that the at least one pixel has an unacceptable grayscale level upon the mean differences having different signs; and

calculating a second mean of corrected grayscale levels of a second group of pixels in proximity to the at

least one pixel upon the at least one pixel being determined to have an unacceptable grayscale level; and

changing the unacceptable grayscale level to a grayscale level equal to the second mean.

27. A computer signal, comprising the program of claim 23.

28. A computer signal, comprising the program of claim 24.

29. A computer signal, comprising the program of claim 25.

30. A computer signal, comprising the program of claim 26.

31. A computer readable medium, comprising the program of claim 23.

32. A computer readable medium, comprising the program of claim 24.

33. A computer readable medium, comprising the program

of claim 25.

34. A computer readable medium, comprising the program of claim 26.

35. The method of claim 1, wherein the grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale level to a desired grayscale level.

36. The method of claim 2, wherein the grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale level to a desired grayscale level.

37. The method of claim 3, wherein the grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale level to a desired grayscale level.

38. The method of claim 6, wherein the grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale level to a desired grayscale level.

39. A method of driving a display, comprising:
correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and
spatial filtering the corrected at least one pixel.
40. The method of claim 39, wherein the grayscale level of at least one pixel is increased to facilitate a transition from a current grayscale level to a desired grayscale level.
41. The method of claim 39, wherein the grayscale level is increased from a desired grayscale level to facilitate a transition from a current grayscale level to a desired grayscale level.
42. A program, adapted to cause a computer to execute:
correcting a grayscale level of at least one pixel of a display to facilitate a transition from a current grayscale level to a desired grayscale level; and
spatial filtering the corrected at least one pixel.
43. A computer signal, comprising the program of claim 42.

44. A computer readable medium, comprising the program of claim 42.

45. A computer readable medium, adapted to cause a computer to perform the method of claim 40.

46. A display, comprising:

a correction section, adapted to correct a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and

a filter, adapted to spatially filter the corrected at least one pixel.

47. A display, comprising:

means for correcting a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level; and

means for spatially filtering the corrected at least one pixel.

48. The display of claim 47, wherein the means for correcting includes overshoot driving of the display.

49. The display of claim 47, wherein the means for correcting is for increasing a grayscale level of at least one pixel to facilitate a transition from a current grayscale level to a desired grayscale level.

50. A method of driving a display, comprising:

determining a signal for driving at least one pixel to produce a desired grayscale level from a current grayscale level; and

spatial filtering the at least one pixel.

51. The method of claim 50, wherein a grayscale level of the signal is increased from a desired grayscale value to facilitate a transition from a current grayscale level to a desired grayscale level.

52. A program, adapted to cause a computer to execute:

determining a signal for driving at least one pixel to produce a desired grayscale level from a current grayscale level; and

spatial filtering the at least one pixel.

53. A computer signal, comprising the program of claim

52.

54. A computer readable medium, comprising the program of claim 52.

55. A computer readable medium, adapted to cause a computer to perform the method of claim 50.

56. A display, comprising:

a device, adapted to determine a signal for driving at least one pixel to produce a desired grayscale level from a current grayscale level; and

a filtering device, adapted to spatially filter the at least one pixel.

57. A display, comprising:

means for determining a signal for driving at least one pixel to produce a desired grayscale level from a current grayscale level; and

means for spatially filtering the at least one pixel.

58. The display of claim 57, wherein the means for determining includes determining an overshoot driving signal for the display.

59. The display of claim 57, wherein the means for determining is for increasing a grayscale level of the signal from a desired grayscale value to facilitate a transition from a current grayscale level to a desired grayscale level.